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RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/090,035

DATE: 03/20/2002 P.5
TIME: 11:38:01

Input Set : A:\5718-198.txt
Output Set: N:\CRF3\03202002\J090035.raw

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      4 <110> APPLICANT: Simmons, Carl R.
      8 <120> TITLE OF INVENTION: Nucleic Acids Encoding Defense Inducible
      9       Proteins and Uses Thereof
     12 <130> FILE REFERENCE: 35718/242990
W--> 14 <140> CURRENT APPLICATION NUMBER: US/10/090,035
C--> 14 <141> CURRENT FILING DATE: 2002-02-28
     16 <150> PRIOR APPLICATION NUMBER: 60/272,227
W--> 18 <151> PRIOR FILING DATE: 02/28/2001
     20 <160> NUMBER OF SEQ ID NOS: 25
     22 <170> SOFTWARE: FastSEQ for Windows Version 4.0
     24 <210> SEQ ID NO: 1
     25 <211> LENGTH: 676
     26 <212> TYPE: DNA
     27 <213> ORGANISM: Zea mays
     29 <220> FEATURE:
     30 <221> NAME/KEY: CDS
     31 <222> LOCATION: (89)...(367)
     33 <400> SEQUENCE: 1
     34 acccacgcgt ccgcccacgc gtccgcagca atccacacaa gcacttcgaa ggaccactgc     60
     35 tcggaggaca caccaagcgt ctgcacca atg gct tac tac cag gag gtg gac        112
     36                                Met Ala Tyr Tyr Gln Glu Val Asp        112
     37                                  1               5
     39 tac tgc tcg gag gag gtg agg tcg gtg gcc ccg gcc ggc ttc ggc cgc      160
     40 Tyr Cys Ser Glu Glu Val Arg Ser Val Ala Pro Ala Gly Phe Gly Arg
     41      10              15                  20
     43 cac ggc ggc ggc gtc cag cag cac gtc gtc aag gag aag ttc gag gag      208
     44 His Gly Gly Gly Val Gln Gln His Val Val Lys Glu Lys Phe Glu Glu
     45  25               30                  35                  40
     47 gtc gac acg gta tca cgc gcc ggc gcc aac cac cac cac cac cat ggt      256
     48 Val Asp Thr Val Ser Arg Ala Gly Ala Asn His His His His His Gly
     49                  45                  50                  55
     51 cac cac ggc ggc cac ggc ttc gtg gtg cgc gag acc agg gtc gag gag      304
     52 His His Gly Gly His Gly Phe Val Val Arg Glu Thr Arg Val Glu Glu
     53              60                  65                  70
     55 gac atc aac acc tgc acc ggc gag gtc cac gag cgc agg gag agc ttc      352
     56 Asp Ile Asn Thr Cys Thr Gly Glu Val His Glu Arg Arg Glu Ser Phe
     57          75                  80                  85
     59 ctc gcc agg gct aac tgagccgccc ggcggccggc atccacgccc gttcgtgctt      407
     60 Leu Ala Arg Ala Asn
     61          90
     63 gcctgcgtgc cttatgtatg tctgtggttg actggttgtg cagggtcatc gtacttggct      467
     64 atcgtacgtg cacgcactca gctcctgtac gaattacgac aataagctcg tgacctgaat      527
     65 aaaacttctt cgtaatacta atacctacat caaaaaaaaa aaaaaaaaaa aaaaaaaaaa      587
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PATENT APPLICATION: US/10/090,035   TIME: 11:38:01

Input Set : A:\5718-198.txt
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66 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa    647
67 aaaaaaaaaa aaaaaaaaaa aaaaaaaaa                                      676
69 <210> SEQ ID NO: 2
70 <211> LENGTH: 93
71 <212> TYPE: PRT
72 <213> ORGANISM: Zea mays
74 <400> SEQUENCE: 2
75 Met Ala Tyr Tyr Gln Glu Val Asp Tyr Cys Ser Glu Glu Val Arg Ser
76 1               5                   10                  15
77 Val Ala Pro Ala Gly Phe Gly Arg His Gly Gly Gly Val Gln Gln His
78              20                  25                  30
79 Val Val Lys Glu Lys Phe Glu Glu Val Asp Thr Val Ser Arg Ala Gly
80          35                  40                  45
81 Ala Asn His His His His His Gly His His Gly Gly His Gly Phe Val
82      50                  55                  60
83 Val Arg Glu Thr Arg Val Glu Glu Asp Ile Asn Thr Cys Thr Gly Glu
84 65                  70                  75                  80
85 Val His Glu Arg Arg Glu Ser Phe Leu Ala Arg Ala Asn
86                  85                  90
88 <210> SEQ ID NO: 3
89 <211> LENGTH: 574
90 <212> TYPE: DNA
91 <213> ORGANISM: Zea mays
93 <220> FEATURE:
94 <221> NAME/KEY: CDS
95 <222> LOCATION: (96)...(374)
97 <400> SEQUENCE: 3
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99 ggcgctgcgc acagacacac caagcgtcgg cacca atg gct tac tac cag gag     113
100                                           Met Ala Tyr Tyr Gln Glu
101                                           1               5
103 gtg gac tac tgc tcg gag gag gtg agg tcg gtg gcc ccg gcc ggc ttc   161
104 Val Asp Tyr Cys Ser Glu Glu Val Arg Ser Val Ala Pro Ala Gly Phe
105              10                  15                  20
107 ggc cgc cac ggc ggc ggc gtc cag cag cac gtc gtc aag gag aag ttc   209
108 Gly Arg His Gly Gly Gly Val Gln Gln His Val Val Lys Glu Lys Phe
109          25                  30                  35
111 gag gag gtc gac acg gtc tca cgc gcc ggc gcc aac cac cac cac cac   257
112 Glu Glu Val Asp Thr Val Ser Arg Ala Gly Ala Asn His His His His
113      40                  45                  50
115 cat ggt cac cac ggc ggc cac ggc ttc gtg gtg cgc gag acc agg gtc   305
116 His Gly His His Gly Gly His Gly Phe Val Val Arg Glu Thr Arg Val
117 55                  60                  65                  70
119 gaa gag gac atc aac acc tgc acc ggc gag gtc cac gag cgc agg gag   353
120 Glu Glu Asp Ile Asn Thr Cys Thr Gly Glu Val His Glu Arg Arg Glu
121                  75                  80                  85
123 agc ttc ctc gcc agg gct aac tgagccgccc ggcggccggc atccacgccc       404
124 Ser Phe Leu Ala Arg Ala Asn
125                  90
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127 gttcgtgctt gcctgcgtgc cttatgtatg tctgtggttg actggttgtt cagggtcatc     464
128 gtacttggct atcgtacgtg cacgcactca gctcctgtac gaattacgac aataagctcg     524
129 tgacctgaat aaaacttctt cgtaatacta aaaaaaaaaa aaaaaaaaaa                  574
131 <210> SEQ ID NO: 4
132 <211> LENGTH: 93
133 <212> TYPE: PRT
134 <213> ORGANISM: Zea mays
136 <400> SEQUENCE: 4
137 Met Ala Tyr Tyr Gln Glu Val Asp Tyr Cys Ser Glu Glu Val Arg Ser
138 1               5                   10                  15
139 Val Ala Pro Ala Gly Phe Gly Arg His Gly Gly Gly Val Gln Gln His
140             20              25                  30
141 Val Val Lys Glu Lys Phe Glu Glu Val Asp Thr Val Ser Arg Ala Gly
142         35                  40                  45
143 Ala Asn His His His His His Gly His His Gly Gly His Gly Phe Val
144     50                  55                  60
145 Val Arg Glu Thr Arg Val Glu Glu Asp Ile Asn Thr Cys Thr Gly Glu
146 65                  70                  75                  80
147 Val His Glu Arg Arg Glu Ser Phe Leu Ala Arg Ala Asn
148             85                  90
150 <210> SEQ ID NO: 5
151 <211> LENGTH: 577
152 <212> TYPE: DNA
153 <213> ORGANISM: Zea mays
155 <220> FEATURE:
156 <221> NAME/KEY: CDS
157 <222> LOCATION: (99)...(377)
159 <400> SEQUENCE: 5
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161 acgggcgctg cgcacagaca caccaagcgt cggcacca atg gct tac tac cag gag    116
162                                             Met Ala Tyr Tyr Gln Glu
163                                             1               5
165 gtg gac tac tgc tcg gag gag gtg agg tcg gtg gcc ccg gcc ggc ttc     164
166 Val Asp Tyr Cys Ser Glu Glu Val Arg Ser Val Ala Pro Ala Gly Phe
167             10                  15                  20
169 ggc cgc cac ggc ggc ggc gtc cag cag cac gtc gtc aag gag aag ttc     212
170 Gly Arg His Gly Gly Gly Val Gln Gln His Val Val Lys Glu Lys Phe
171         25                  30                  35
173 gag gag gtc gac acg gtc tca cgc gcc ggc gcc aac cac cac cac cac     260
174 Glu Glu Val Asp Thr Val Ser Arg Ala Gly Ala Asn His His His His
175     40                  45                  50
177 cat ggt cac cac ggc ggc cac ggc ttc gtg gtg cgc gag acc agg gtc     308
178 His Gly His His Gly Gly His Gly Phe Val Val Arg Glu Thr Arg Val
179 55                  60                  65                  70
181 gaa gag gac atc aac acc tgc acc ggc gag gtc cac gag cgc agg gag     356
182 Glu Glu Asp Ile Asn Thr Cys Thr Gly Glu Val His Glu Arg Arg Glu
183             75                  80                  85
185 agc ttc ctc gcc agg gct aac tgagccgccc ggcggccggc atccacgccc         407
186 Ser Phe Leu Ala Arg Ala Asn
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RAW SEQUENCE LISTING   DATE: 03/20/2002
PATENT APPLICATION: US/10/090,035   TIME: 11:38:01

Input Set : A:\5718-198.txt
Output Set: N:\CRF3\03202002\J090035.raw

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187            90
189 gttcgtgctt gcctgcgtgc cttatgtatg tctgtggttg actggttgtt cagggtcatc   467
190 gtacttggct atcgtacgtg cacgcactca gctcctgtac gaattacgac aataagctcg   527
191 tgacctgaat aaaacttctt cgtaatacta aaaaaaaaaa aaaaaaaaaa              577
193 <210> SEQ ID NO: 6
194 <211> LENGTH: 93
195 <212> TYPE: PRT
196 <213> ORGANISM: Zea mays
198 <400> SEQUENCE: 6
199 Met Ala Tyr Tyr Gln Glu Val Asp Tyr Cys Ser Glu Glu Val Arg Ser
200 1               5                  10                  15
201 Val Ala Pro Ala Gly Phe Gly Arg His Gly Gly Gly Val Gln Gln His
202             20                  25                  30
203 Val Val Lys Glu Lys Phe Glu Glu Val Asp Thr Val Ser Arg Ala Gly
204         35                  40                  45
205 Ala Asn His His His His His Gly His His Gly Gly His Gly Phe Val
206     50                  55                  60
207 Val Arg Glu Thr Arg Val Glu Glu Asp Ile Asn Thr Cys Thr Gly Glu
208 65                  70                  75                  80
209 Val His Glu Arg Arg Glu Ser Phe Leu Ala Arg Ala Asn
210                 85                  90
212 <210> SEQ ID NO: 7
213 <211> LENGTH: 580
214 <212> TYPE: DNA
215 <213> ORGANISM: Zea mays
217 <220> FEATURE:
218 <221> NAME/KEY: CDS
219 <222> LOCATION: (99)...(380)
221 <400> SEQUENCE: 7
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223 acgggcgctg cacacagaca caccaagcgt cggcacca atg gct tac tac cag gag  116
224                                             Met Ala Tyr Tyr Gln Glu
225                                             1               5
227 gtg gac tac tgc tcg gag gag gtg agg tcg gtg gcc ccg gcc ggc ttc   164
228 Val Asp Tyr Cys Ser Glu Glu Val Arg Ser Val Ala Pro Ala Gly Phe
229             10                  15                  20
231 ggc cgc cac gga ggc ggc gtc cag cag cac gtc gtc aag gag aag ttc   212
232 Gly Arg His Gly Gly Gly Val Gln Gln His Val Val Lys Glu Lys Phe
233         25                  30                  35
235 gag gag gtc gac acg gtc tca cgc gcc ggc gcc aac cac cac cac cac   260
236 Glu Glu Val Asp Thr Val Ser Arg Ala Gly Ala Asn His His His His
237     40                  45                  50
239 cac cat ggt cac cac ggc ggc cac ggc ttc gtg gtg cgc gag acc agg   308
240 His His Gly His His Gly Gly His Gly Phe Val Val Arg Glu Thr Arg
241 55                  60                  65                  70
243 gtc gag gag gac atc aac acc tgc acc ggc gag gtc cac gag cgc agg   356
244 Val Glu Glu Asp Ile Asn Thr Cys Thr Gly Glu Val His Glu Arg Arg
245                 75                  80                  85
247 gag agc ttc ctc gcc agg gct aac tgagccgccc ggcggccggc atccacgccc   410
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248 Glu Ser Phe Leu Ala Arg Ala Asn
249               90
251 gttcgtgcct gcctgcgtgc cttatgtatg tctgtggttg actggttgtg cagggtcatc    470
252 gtacttggct atcgtacgtg cacgcactca gctcctgtac gaattacgac aataagctcg    530
253 tgacctgaat aaaacttctt cgtaatacta aaaaaaaaaa aaaaaaaaa                 580
255 <210> SEQ ID NO: 8
256 <211> LENGTH: 94
257 <212> TYPE: PRT
258 <213> ORGANISM: Zea mays
260 <400> SEQUENCE: 8
261 Met Ala Tyr Tyr Gln Glu Val Asp Tyr Cys Ser Glu Glu Val Arg Ser
262 1               5               10              15
263 Val Ala Pro Ala Gly Phe Gly Arg His Gly Gly Gly Val Gln Gln His
264           20              25              30
265 Val Val Lys Glu Lys Phe Glu Glu Val Asp Thr Val Ser Arg Ala Gly
266           35              40              45
267 Ala Asn His His His His His His Gly His His Gly Gly His Gly Phe
268       50              55              60
269 Val Val Arg Glu Thr Arg Val Glu Glu Asp Ile Asn Thr Cys Thr Gly
270 65              70              75              80
271 Glu Val His Glu Arg Arg Glu Ser Phe Leu Ala Arg Ala Asn
272               85              90
274 <210> SEQ ID NO: 9
275 <211> LENGTH: 529
276 <212> TYPE: DNA
277 <213> ORGANISM: Zea mays
279 <220> FEATURE:
280 <221> NAME/KEY: CDS
281 <222> LOCATION: (53)...(331)
283 <400> SEQUENCE: 9
284 agcggcgggg aagaagggct acaagatgaa gacgcacaag gcgtcggcac ca atg gct    58
285                                                           Met Ala
286                                                            1
288 tac tac cag gag gtg gac tac tgc tcg gag gag gtg agg tcg gtg gcc    106
289 Tyr Tyr Gln Glu Val Asp Tyr Cys Ser Glu Glu Val Arg Ser Val Ala
290       5               10              15
292 ccg gcc ggc ttc ggc cgc cac ggc ggc ggc gtc cag cag cac gtc gtc    154
293 Pro Ala Gly Phe Gly Arg His Gly Gly Gly Val Gln Gln His Val Val
294       20              25              30
296 aag gag aag ttc gag gag gtc gac acg gtc gca cgc gcc ggc gcc aac    202
297 Lys Glu Lys Phe Glu Glu Val Asp Thr Val Ala Arg Ala Gly Ala Asn
298 35              40              45              50
300 cac cac cac cac cat ggt cac cac ggc ggc cac ggc ttc gtg gtg cgc    250
301 His His His His His Gly His His Gly Gly His Gly Phe Val Val Arg
302               55              60              65
304 gag acc agg gtc gag gag gac atc aac acc tgc acc ggc gag gtc cac    298
305 Glu Thr Arg Val Glu Glu Asp Ile Asn Thr Cys Thr Gly Glu Val His
306               70              75              80
308 gag cgc agg gag agc ttc ctc gcc agg gct aac tgagcagccc gggcggccgg    351
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VERIFICATION SUMMARY   DATE: 03/20/2002
PATENT APPLICATION: US/10/090,035   TIME: 11:38:02

Input Set : A:\5718-198.txt
Output Set: N:\CRF3\03202002\J090035.raw

L:14 M:282 W: Numeric Field Identifier Missing, <140> CURRENT APPLICATION NUMBER: is Added.
L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:18 M:256 W: Invalid Numeric Header Field, Wrong Prior FILING DATE:YYYY-MM-DD
L:377 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:378 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:381 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:382 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:385 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:386 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:389 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:390 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:413 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:415 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:417 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:419 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:466 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
L:530 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17
L:579 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19
L:583 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19
L:587 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19
L:591 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19
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L:713 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23
L:717 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23
L:721 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23
L:722 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23
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